

Resinlab® EP1056LV Black Urethane Modified Epoxy Casting Resin

Category : Polymer , Thermoset , Epoxy , Epoxy Cure Resin

Material Notes:

Resinlab™ EP1056LV Black is a two part urethane modified epoxy casting resin designed to give good adhesion to metals and PVC. It has good wetting to most surfaces and is free-flowing to penetrate components and give good selfleveling and air release. It has very good resistance to water, acids and bases and most organic solvents. It was especially formulated to a 2A:1B mix ratio for use in automatic mixing equipment and dispensers with static mixers. EP1056LV Black will reach handle cure at room temperature within 8 – 16 hours. Cure time can be accelerated by the application of heat. Times and temperatures from 1 hour at 65°C to 15 minutes at 100°C are typical for most applications. Cooler temperatures will also extend work time and increase cure times. Information Provided by Resinlab L.L.C., an Ellsworth Adhesives Company.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Resinlab-EP1056LV-Black-Urethane-Modified-Epoxy-Casting-Resin.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.950 g/cc	0.950 g/cc	Part B; TM R050-16
	1.15 g/cc	1.15 g/cc	Mixed; TM R050-16
	1.25 g/cc	1.25 g/cc	Part A; TM R050-16
Water Absorption	0.22 %	0.22 %	TM R050-35
	@Time 86400 sec	@Time 24.0 hour	
Viscosity	300 cP	300 cP	Part B, RVT, #3, 2.5 rpm; TM R050-12
	10000 cP	10000 cP	Mixed; TM R050-12
	23000 cP	23000 cP	Part A, RVT, #7, 2.5 rpm; TM R050-12

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	80	80	TM R050-17
Tensile Strength at Break	30.3 MPa	4400 psi	TM R050-36
Tensile Strength, Ultimate	33.1 MPa	4800 psi	TM R050-36
Tensile Strength, Yield	15.9 MPa	2300 psi	TM R050-36
Elongation at Break	5.0 - 7.0 %	5.0 - 7.0 %	TM R050-36
Tensile Modulus	1.86 GPa	270 ksi	TM R050-36
Compressive Yield Strength	37.9 MPa	5500 psi	TM R050-38
Compressive Strength	138 MPa	20000 psi	Break; TM R050-38

Mechanical Properties	138 MPa Metric	20000 psi English	Ultimate TM R050-38 Comments
Compressive Modulus	1.24 GPa	180 ksi	TM R050-38
Adhesive Bond Strength	24.1 MPa	3500 psi	Lap shear; 2024 T3 Al Abraded / MEK Wipe; TM R050-37

Thermal Properties	Metric	English	Comments
CTE, linear	55.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	30.6 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft ² -°F	
Maximum Service Temperature, Air	150 °C	302 °F	
Minimum Service Temperature, Air	-40.0 °C	-40.0 °F	
Glass Transition Temp, Tg	50.0 °C	122 °F	TM R050-25

Electrical Properties	Metric	English	Comments
Volume Resistivity	8.00e+14 ohm-cm	8.00e+14 ohm-cm	
Dielectric Constant	4.5 @Frequency 100 Hz, Temperature 25.0 °C	4.5 @Frequency 100 Hz, Temperature 77.0 °F	
Dielectric Strength	16.1 kV/mm	410 kV/in	

Processing Properties	Metric	English	Comments
Pot Life	30 - 40 min	30 - 40 min	Mass: 50g; TM R050-19

Descriptive Properties	Value	Comments
Color	Black	
Mix Ratio	100:40	Weight
	2:1	Volume

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